



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,267	10/27/2004	Ryoto Shima	TSL 1786 US	5304
8131 7590 12/28/2006 MCKELLAR IP LAW, PLLC 784 SOUTH POSEYVILLE ROAD MIDLAND, MI 48640			EXAMINER NGUYEN, KHANH TUAN	
			ART UNIT 1751	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/509,267

Applicant(s)

SHIMA ET AL.

Examiner

Khanh T. Nguyen

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 12/04/2006 has been partially regarded by Examiner and made of record in the application file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 10 and 20-24 are rejected 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (U.S Pat. 5,482,978 hereinafter, "Takahashi") in view of Shimizu et al (U.S Pat. 4,742,142 hereinafter, "Shimizu").

With respect to instant claim 1, Takahashi disclose an electrically conductive silicone rubber composition comprising: (A) 100 parts by weight of an

Art Unit: 1751

organopolysiloxane having at least two alkenyl groups per molecule [(Col. 2, lines 29-39) and (Col. 5, lines 15-35)], (B) an amount sufficient to cure compositions of an organopolysiloxane having at least two silicon-bonded hydrogen atoms per molecule (Col. 5, lines 32-35), (C) an amount sufficient to promote cure of the compositions of a platinum based catalyst (Col. 6, lines 1-23).

Takahashi does not explicitly disclose an electrically conductive silicone rubber composition comprising: (D) 50 to 5,000 parts by weight of a metal based electrically conductive filler and (E) 5 to 500 parts by weight of spherical silicone rubber particles with a surface active agent content of not more than 0.3 wt %.

However, Shimizu suggests an electrically conductive silicone rubber composition comprising: (D) 50 to 5,000 parts by weight of a metal based electrically conductive filler (Col. 2, lines 1-5) and (E) 50 to 500 parts by weight of spherical silicone rubber particles with a surface active agent content of not more than 0.3 wt % (Col. 5, lines 43-60).

It would have been obvious to one of ordinary skill in the art at the time the invention to have formulated an electrically conductive silicone rubber composition, as taught by Takahashi in view of Shimizu, which contained a metal based electrically conductive filler and spherical silicone rubber particles with a surface active agent thereof as disclosed and taught by Takahashi in view of Shimizu.

Therefore, one of ordinary skill in the art would have had a reasonable expectation of success, because such an electrically conductive silicone rubber composition containing a metal based electrically conductive filler and spherical silicone

Art Unit: 1751

rubber particles with a surface active agent thereof component is expressly suggested by Takahashi in view of Shimizu disclosure to provide a method for producing microfine silicone rubber powder from curable liquid organosiloxane composition.

Regarding claim 2, Shimizu further discloses the content of component (B) provides from 0.1 mol to 10 mol of silicon-bonded hydrogen atoms from component (B) per 1 mol of alkenyl groups of component (A). (Col. 3, lines 8-12)

Regarding claim 3, Shimizu further discloses the content of component (C) provides, in weight terms, from 0.1 ppm to 10,000 ppm of platinum metal from component (C) relative to total weight of component (A) and component (B). (Col. 3, lines 45-48)

Regarding claim 4, Shimizu further discloses a component (D) comprises an electrically conductive metal powder (platinum group) or a micropowder plated or coated with metal via vapor deposition. (Col. 3, lines 45-48)

Regarding claim 5, Shimizu further discloses component (E) comprises spherical silicone rubber particles obtained by curing a silicone rubber composition emulsified in an aqueous solution of a surface active agent (surfactant). (Col. 1, lines 38-47)

Regarding claim 6, Shimizu further discloses component (E) comprises spherical silicone rubber particles from which excess surface active agent has been removed by washing with water. (Col. 6, lines 26-28)

Regarding claim 10, Shimizu suggests an electrically conductive silicone rubber product prepared by curing. [(Col. 3, lines 65-67) and (Col. 4, lines 1-3)]

Regarding claim 20, Shimizu suggests a product prepared by curing the composition of claim 2. [(Col. 3, lines 65-67) and (Col. 4, lines 1-3)]

Regarding claim 21, Shimizu suggests a product prepared by curing the composition of claim 3. [(Col. 3, lines 65-67) and (Col. 4, lines 1-3)]

Regarding claim 22, Shimizu suggests a product prepared by curing the composition of claim 4. [(Col. 3, lines 65-67) and (Col. 4, lines 1-3)]

Regarding claim 23, Shimizu suggests a product prepared by curing the composition of claim 5. [(Col. 3, lines 65-67) and (Col. 4, lines 1-3)]

Regarding claim 24, Shimizu suggests a product prepared by curing the composition of claim 6. [(Col. 3, lines 65-67) and (Col. 4, lines 1-3)]

4. Claims 7-9, 13-19 and 25-26 rejected 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (U.S Pat. 5,482,978 hereinafter, "Takahashi") in view of Shimizu et al (U.S Pat. 4,742,142 hereinafter, "Shimizu") and further in view of Honma et al (U.S Pat. 6,299,952 hereinafter, "Honma").

Takahashi and Shimizu relied upon as set forth above. With respect to instant claim 7, Takahashi and Shimizu did not explicitly disclose an electrically conductive silicone rubber composition comprising (F) 0.001 parts by weight to 5 parts by weight, per 100 parts by weight of component (A), of a reaction inhibitor.

In the same field of endeavor, Honma discloses a composition comprising (F) 0.001 parts by weight to 5 parts by weight, per 100 parts by weight of component (A), of a reaction inhibitor. [(Col. 3, lines 57-64) and (Col. 5, lines 30-52)]

It would have been obvious to one of ordinary skill in the art at the time the invention to have formulated an electrically conductive silicone rubber composition, as taught by Takahashi in view of Shimizu and further in view of Honma, which contained a reaction inhibitor thereof as disclosed and taught by Takahashi in view of Shimizu and further in view of Honma.

Therefore, one of ordinary skill in the art would have had a reasonable expectation of success, because such an electrically conductive silicone rubber composition containing a reaction inhibitor thereof component is expressly suggested by Takahashi in view of Shimizu and further in view of Honma disclosure to provide a

Art Unit: 1751

moldable silicone rubber sponge composition that during foaming does not generate gas harmful to humans and that cures to give a silicone rubber sponge that has uniform and microfine cells and a high mechanical strength.

Regarding claim 8, Honma further discloses a composition comprising (G) 0.1 parts by weight to 100 parts by weight, relative to the total amount of component (A) to component (E) as 100 parts by weight, of an organic solvent. (Col. 8, lines 34-67)

Regarding claim 9, Honma suggests the use of the composition of claims 1 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 13, Honma suggests the use of the composition of claim 2 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 14, Honma suggests the use of the composition of claim 3 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 15, Honma suggests the use of the composition of claim 4 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 16, Honma suggests the use of the composition of claim 5 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 17, Honma suggests the use of the composition of claim 6 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 18, Honma suggests the use of the composition of claim 7 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 19, Honma suggests the use of the composition of claim 8 for pressure forming, transfer molding, injection molding, or calender molding. (Col. 7, lines 38-47)

Regarding claim 25, Honma suggests a product prepared by curing the composition of claim 7. (Col. 7, lines 35-39)

Regarding claim 26, Honma suggests a product prepared by curing the composition of claim 8. (Col. 7, lines 35-39)

5. Claims 11 and 12 are rejected 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (U.S Pat. 5,482,978 hereinafter, "Takahashi") in view of Shimizu et al (U.S Pat. 4,742,142 hereinafter, "Shimizu") and further in view of Nakayoshi et al (U.S Pat. 6,299,952 hereinafter, "Nakayoshi").

Takahashi and Shimizu relied upon as set forth above. With respect to instant claim 11, Takahashi and Shimizu did not explicitly disclose the use of the product of claim 10 as an electrically conductive adhesive, heat-radiating adhesive, or electromagnetic wave shielding agent.

However, Nakayoshi suggests the use of the product of claim 10 as an electrically conductive adhesive, heat-radiating adhesive, or electromagnetic wave shielding agent. (Col. 12, lines 18-24)

It would have been obvious to one of ordinary skill in the art at the time the invention to have formulated an electrically conductive silicone rubber composition, as taught by Takahashi in view of Shimizu and further in view of Nakayoshi, for the use of an electrically conductive adhesive, heat-radiating adhesive, or electromagnetic wave

Art Unit: 1751

shielding agent thereof as disclosed and taught by Takahashi in view of Shimizu and further in view of Nakayoshi.

Therefore, one of ordinary skill in the art would have had a reasonable expectation of success, because such an electrically conductive silicone rubber composition for the use of an electrically conductive adhesive, heat-radiating adhesive, or electromagnetic wave shielding agent thereof component is expressly suggested by Takahashi in view of Shimizu and further in view of Nakayoshi disclosure to provide a curable organosiloxane compositions typically exhibit volume resistivities below 0.1 ohm-cm.

Regarding claim 12, Nakayoshi suggests the use of the product of claim 10 for making flexible connectors, anisotropic electrically conductive films, and various other electrode materials, or for heat-radiating materials.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh T. Nguyen whose telephone number is (571) 272-8082. The examiner can normally be reached on Monday-Friday 8:00-5:00 EST PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone

Art Unit: 1751

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Khanh T. Nguyen
Examiner
12/15/2006



Mark Kopec
Primary Examiner